

The impact of the Ownership Dimension on Functional specialisation: The Case of CEE Countries

Topic: Input-Output Modelling: Trade and Global Value Chains Policies - I

Author: Oscar Lemmers

The emergence of international production networks has given rise to an ever more granular international division of labour with new opportunities for specialisation. Differences between countries are not only due to specialisation in different industries, but also because of specialisation in different tasks in the same industries. This paper focuses on the division of labour according to business functions “ or value-chain functions “ which represent one of the new dimensions of specialisation in international trade called functional specialisation. We measure functional specialisation based on business activities offshored by firms via FDI to determine the specialisation patterns of a given location. The data source is the FDI Market database. Functional specialisation gives us the answer on the question in which business functions a country is specialised. The policy relevance is that fabrication generally yields less value added than other business functions such as R&D. Countries might get stuck in fabrication instead of upgrade their specialisation pattern. Hence it is important to know what factors drive these patterns.

Hence, the research question of this paper: what are the factors that determine functional specialisation in Central and Eastern Europe (CEE) countries? This is especially relevant for the “fabrication” function, which is dominant in these countries. We use the AMNE ICIO (Activities of Multinational Enterprises Inter Country Input-Output) database and apply standard input-output analysis. This allows us to estimate the direct and indirect trade activities of domestically and foreign-owned firms. These are subsequently considered as potential determinants of functional specialisation. Additionally, based on the global value chain literature and on international trade and economic development theories, we also included other variables. To be more specific, we check how wages, skills, GDP per capita, labour productivity might influence the functional specialisation patterns.

The use of the AMNE data allows us to take firm heterogeneity into account. In this extended input-output table, each industry is split. For example, metal manufacturing domestically owned and metal manufacturing foreign owned. The firm heterogeneity literature considers, among others, magnitude of foreign presence and the interplay between the different types of firms. An example of the latter is that foreign multinationals often form a gateway to other countries for domestically owned firms. The main novelty of the paper is that we combine several strands of economic literature, namely firm heterogeneity, global value chains and functional specialisation.

Our analyses focus on eight countries in Central and Eastern Europe: The Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, and Slovenia. The analysis contains both manufacturing and services industries. The time period under concern is 2005-2014. To estimate the relation of functional specialisation with the variables mentioned above, we use ordinary least squares (OLS) with fixed effects as a baseline estimator. As a robustness check, we use a beta regression model because of the bounded character of dependent variables, between zero and one, when the endpoints are excluded. For the beta regression models, we present the average marginal effects.

Our preliminary results suggest a negative effect of wages on specialisation in a fabrication function: higher wages are paired with less specialisation. In turn, increasing labour productivity boosts specialisation in fabrication. Additionally, growing employment makes functional specialisation in fabrication increase. The growth of GDP per capita negatively affects functional specialisation in

fabrication activities. Additionally, we find that domestic firms increase functional specialisation in fabrication lightly stronger than foreign-owned exporting firms, whether they export directly or indirectly.